

Abstract

The present invention relates to the use of a catalytic system comprising a metal of group VIII, a metal of group VI, a metal oxide as carrier and suitable quantities of a component selected from a zeolite of the FER type, phosphorous, and a mixture thereof, in upgrading of hydrocarbons boiling in the naphtha range containing sulfur impurities, namely in hydrodesulfurization with contemporaneous skeleton isomerization of olefins contained in said hydrocarbons and/or with reduction of olefins hydrogenation, carried out in a single step.